

Amendment A and Response dated October 29, 2003  
U.S. Patent Application Serial No.: 09/937,609  
Inventors: Neil Loxley et al.  
Reply to Office Action Dated July 29, 2003

**Amendments to the Specification:**

Please add the following Paragraph [0001] (This is an assumption since this patent application was not published nor filed electronically to obtain requisite paragraph numbering) on Page 1, Lines 1-4, after the Title of **METHOD AND APPARATUS FOR PROLONGING THE LIFE OF AN X-RAY TARGET:**

**APPLICATION CROSS-REFERENCES**

This application is a U.S. national phase application of International Patent Application No. PCT/GB00/01164 and published in English, filed March 27, 2000, which claims priority of Great Britain Patent No. 9906886.8, filed March 26, 1999.

Please replace paragraph [0043] (This is an assumption since this patent application was not published nor filed electronically to obtain requisite paragraph numbering), Page 8, Lines 12-15 with the following amended paragraph:

The actions of defocussing and refocussing the electron beam 8 are activated either at will by the operator by varying the power of the focussing coils, preferably by ~~an electronic switch control, or automatically by the action of a shutter~~ an electronic switch control 50, or automatically by the action of a shutter 51 on the output side of the X-ray beam or other external event defined by the operator.

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Please replace paragraph [0047] (This is an assumption since this patent application was not published nor filed electronically to obtain requisite paragraph numbering), Page 9, Lines 16-28 with the following amended paragraph:

With reference to Figs. 4 and 5 there is shown a tube 2, electron gun 3 and target 4, together with electron focussing means 7, which are discussed in more detail above. In the first focussed state, as shown in Fig. 4, the electron beam 28 is focussed by the focussing means 7 so that it forms a relatively small spot source 22 on the target 4, the spot source being the required size for generation of X-rays for the intended purpose. In this state In this state, the X-ray generator is operational and the brightness of the emitted X-ray beam may be controlled by varying the applied power to the tube. When the generator is switched to a second focussed state, as shown in Fig. 5, the electron beam 38 has the same power, but is focussed by the focussing means to a second spot source 23 on a different part of the target 4. The spot source 23 is the required size for generation of X-rays for the intended purpose, and will generally ~~be the same size~~ be the same size as the spot source 22 in the first state. There is no overlap between the positions of spot sources 22 and 23.